

REMARKS

This Amendment is submitted in response to the non-final Office Action dated January 14, 2011. In the non-final Office action: (a) claims 1, 12-14, and 16 are objected to because of informalities; (b) claim 1 is rejected under 35 U.S.C. § 112 as being indefinite; (c) claims 1-3, 6-17, and 21 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,688,693 to Fine et al. (hereinafter "Fine"); and (d) claims 1-3, 6-17, and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,509,537 to Krieg et al. (hereinafter "Krieg") in view of Fine.

By way of this amendment, claim 1 is amended, and support for the amendments to claim 1 can be found at paragraphs [0009] and [0034] of the Substitute Specification, for example. Claims 1, 10-14, and 16 are also amended to delete reference numbers. Accordingly, no new matter has been added.

Reconsideration and withdrawal of the rejections are respectfully requested in view of the foregoing amendments and following remarks.

Interview Summary

The Applicants thank the Examiner for the courtesies extended during the telephone interview of June 16, 2011 with the Applicants' representative, Michael Coyne. In the interview, the differences between the prior art and the present application were discussed, and the Examiner argued that claim 1 may read on the act of washing a dirty dish. It was agreed that the Applicants will present comments and amendments in writing.

Claim Objections

As briefly mentioned above, claims 1, 12-14, and 16 are objected to because of the improper use of reference numbers in the claims. Accordingly, claims 1, 12-14, and 16 (and claims 10 and 11 that are not identified in the Office Action) are amended to delete the reference numbers, and the Applicants respectfully request that these objections be withdrawn.

Rejections Under 35 U.S.C. § 112

Claim 1 is rejected as indefinite for reciting a broad recitation (*i.e.*, “plastic containers”) as well as a narrower statement of a range/limitation (*i.e.*, “including PET bottles”). Accordingly, the narrowing limitation is deleted from amended claim 1, and the Applicants respectfully request that this rejection be withdrawn.

Rejections Under 35 U.S.C. §§ 102(b) and 103(a)

Claim 1 is amended to recite shredding of used plastic containers and conducting controlled decontamination of the plastic according to the decontamination process parameters thus determined, such that the decontamination is automatically adapted to the actual contamination of the plastic.

The Applicants note that by reciting the step of shredding used plastic containers, it is clear that only large-scale industrial reprocessing of shredded materials is covered by amended claim 1. As such, merely washing a dirty dish would not be covered by the method of claim 1 because such a dirty dish would not be shredded prior to washing.

Similarly, one having ordinary skill in the art would recognize that automatically adapting the decontamination to the actual contamination of the plastic would only occur in large-scale industrial reprocessing operations because such automatic adapting of the decontamination would not be cost-effective in a small-scale operation, such as cleaning a small amount of dishes. Moreover, one having ordinary skill in the art would recognize that automatically adapting the decontamination to the actual contamination of the plastic would optimize an industrial-scale reprocessing operation by preventing excess, unnecessary decontamination. Accordingly, and activity such as washing dirty dishes would not be covered by the method of amended claim 1.

With regard to the cited documents, claim 1 is rejected as anticipated by Fine and rejected as obvious over Krieg in view of Fine. However, neither Fine nor Krieg discloses or suggests all of the limitations of amended claim 1.

Specifically, neither Fine nor Krieg discloses or suggests conducting controlled decontamination of a plastic. Decontamination is a term of art and is a process of cleaning an object to remove contamination from its surface. More specifically, decontamination refers

to a cleaning of the flakes by removing contaminants from the flakes and thereby maintaining the amount of plastic material available for reprocessing. As such, decontamination does *not* correspond to a simple rejection or separation of contaminated flakes from cleaner flakes. The distinction of between decontamination and a rejection of strongly contaminated plastics is illustrated by the Applicants in pending claim 13, which recites that when a degree of contamination exceeds a predetermined (third) threshold level, the plastic is sorted out and removed instead of decontaminated according to steps b) and c).

Both Krieg and Fine disclose only the separation of contaminated plastic from cleaner plastic such that the contaminated plastic is not further used (and not a cleaning of the plastic by removing contaminants from the plastic to maintain the amount of plastic available for reprocessing).

Specifically, Fine does not disclose the *cleaning* of flakes by removing contaminants from the flakes, but only teaches the *detection* of specific contaminants in articles made of plastic materials. *See* Fine, col. 2, lines 15-38. Similar to Fine, Krieg fails to disclose the *cleaning* of flakes by removing contaminants from the flakes, but only teaches the *detection* of specific contaminants by spectroscopic analysis. *See* Krieg, col. 1, lines 54-62. Because both Krieg and Fine disclose only the separation of contaminated plastic from cleaner plastic such that the contaminated plastic is not further used (and not a cleaning of the plastic by removing contaminants from the plastic to maintain the amount of plastic available for reprocessing), neither Krieg and Fine discloses decontamination of a plastic at all, let alone a controlled decontamination of a plastic, as recited in amended claim 1. Accordingly, amended claim 1 is allowable for at least this reason.

Claim 1 further recites determining decontamination process parameters as a function of the degree of contamination found in the analyzing step. This means that the decontamination process parameters recited in claim 1 (*i.e.*, time and temperature) can vary depending on the degree of contamination found for the plastic in the analyzing step.

By contrast, neither Fine nor Krieg discloses any relationship between temperature and degree of contamination. Specifically, Krieg is silent as to temperature as any process parameter, let alone as a decontamination process parameter. With regard to the next reference, Fine does not teach a decontamination process at all, as explained above. Instead,

Fine teaches that temperature is related to the *detection* of contamination in a material. *See* Fine, col. 7, lines 1-14. In particular, regardless of the degree of contamination, Fine teaches that the temperature of a wash solution used in a washer (that is used to aid in the detection of contaminants) must be maintained below a maximum temperature at which the plastic material being inspected will vaporize because such vaporization will produce background volatiles that will tend to interfere with the detection of contaminants in the materials. *See* Fine, col. 3, lines 8-13 and col. 7, lines 1-14. At most, temperature is varied depending on material, but the temperature is not varied or adjusted based on the degree of contamination found in the analyzing step.

Fine also fails to disclose or suggest that a process time adapted to the degree of contamination is determined as a decontamination process parameter, as recited in amended claim 1. Fine's only discussion of time relates to the rate at which the analysis process can be conducted, and Fine does not teach that process time is in any way related to the degree of contamination. *See* Fine, col. 4, lines 10-20 and 34-39. Turning to the other reference, Krieg is silent as to process time, let alone a process time that is determined as a decontamination process parameter. Accordingly, amended claim 1 is allowable over each of the references cited by the Office.

In the Office Action, the Office asserts that Fine discloses the process time as a decontamination parameter. *See* Office Action, page 5, lines 15-22. But the portions of Fine asserted to disclose the process time as a decontamination parameter refer to a "sniffer." However, as would be understood by one having ordinary skill in the art, a sniffer is used only to detect contaminants in plastic, and not used to decontaminate plastics. Accordingly, the parameter of the sniffer (*i.e.*, time) identified by the Office is a parameter of the *analysis* recited in step a) of amended claim 1, and not a "decontamination process parameter", which is a technical term that would be understood by one having ordinary skill in the art to indicate an adjustable property of a decontamination process.

Amended claim 1 is also allowable over U.S. Patent No. 6,533,124 to Tacito et al. (hereinafter "Tacito"), which is identified by the Office as a reference made of record. While Tacito does disclose decontamination of a plastic, Tacito fails to disclose determining decontamination process parameters as a function of the degree of contamination found in the

analyzing step and conducting controlled decontamination of the plastic according to the decontamination process parameters thus determined, such that the decontamination is automatically adapted to the actual contamination of the plastic. Accordingly, amended claim 1 is allowable over Tacito.

Because claims 2-17 and 21 depend from allowable claim 1, these claims are also allowable for at least this reason.

Conclusion

The Applicants believe that each of the outstanding rejections, objections, and/or other concerns have been accommodated, traversed or rendered moot. Therefore, the application is considered to be in condition for allowance. Should there remain any outstanding issues that the Office believes may be remedied via telephone conference, please contact the undersigned at (312) 474-6300.

The Applicants submit this Amendment accompanied by a three-month extension of time, and the appropriate extension fee is paid herewith by credit card. In the event any additional fees are required, kindly charge the cost thereof to our Deposit Account No. 13-2855.

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Respectfully submitted,

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